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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/858,332DATE: 07/22/2002  
TIME: 14:17:23Input Set : D:\Seqlist.txt  
Output Set: N:\CRF3\07222002\I858332.raw

4 <110> APPLICANT: Tchaga, Grigory S.  
5 Jokhadze, George  
7 <120> TITLE OF INVENTION: Metal Ion Affinity Tags and Methods for  
8 Using the Same  
10 <130> FILE REFERENCE: CLON056CIP  
12 <140> CURRENT APPLICATION NUMBER: 09/858,332  
C--> 13 <141> CURRENT FILING DATE: 2002-07-02  
15 <150> PRIOR APPLICATION NUMBER: 09/404,017  
16 <151> PRIOR FILING DATE: 1999-09-23  
18 <150> PRIOR APPLICATION NUMBER: 60/101,867  
19 <151> PRIOR FILING DATE: 1998-09-25  
21 <160> NUMBER OF SEQ ID NOS: 21  
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
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28 <213> ORGANISM: Artificial Sequence  
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31 <223> OTHER INFORMATION: synthetic peptide  
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35 1 5  
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40 <212> TYPE: PRT  
41 <213> ORGANISM: Artificial Sequence  
43 <220> FEATURE:  
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51 <211> LENGTH: 18  
52 <212> TYPE: PRT  
53 <213> ORGANISM: Artificial Sequence  
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56 <223> OTHER INFORMATION: synthetic peptide  
58 <400> SEQUENCE: 3  
59 His Asp Asp His Asp Asp His Asp Asp His Asp Asp His  
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61 Asp Asp  
64 <210> SEQ ID NO: 4  
65 <211> LENGTH: 18

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66 <212> TYPE: PRT  
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69 <220> FEATURE:  
70 <223> OTHER INFORMATION: synthetic peptide  
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74 1 5 10 15  
75 Glu Glu  
78 <210> SEQ ID NO: 5  
79 <211> LENGTH: 18  
80 <212> TYPE: PRT  
81 <213> ORGANISM: Artificial Sequence  
83 <220> FEATURE:  
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86 <400> SEQUENCE: 5  
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89 Asp Glu  
92 <210> SEQ ID NO: 6  
93 <211> LENGTH: 18  
94 <212> TYPE: PRT  
95 <213> ORGANISM: Artificial Sequence  
97 <220> FEATURE:  
98 <223> OTHER INFORMATION: synthetic peptide  
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102 1 5 10 15  
103 Glu Asp  
106 <210> SEQ ID NO: 7  
107 <211> LENGTH: 5  
108 <212> TYPE: PRT  
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111 <220> FEATURE:  
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115 Asp Asp Asp Asp Lys  
116 1 5  
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121 <213> ORGANISM: Artificial Sequence  
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128 1  
130 <210> SEQ ID NO: 9  
131 <211> LENGTH: 6  
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133 <213> ORGANISM: Artificial Sequence  
135 <220> FEATURE:  
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140 1 5  
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147 <220> FEATURE:  
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152 1 5  
154 <210> SEQ ID NO: 11  
155 <211> LENGTH: 10  
156 <212> TYPE: PRT  
157 <213> ORGANISM: Artificial Sequence  
159 <220> FEATURE:  
160 <223> OTHER INFORMATION: synthetic peptide  
162 <400> SEQUENCE: 11  
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164 1 5 10  
166 <210> SEQ ID NO: 12  
167 <211> LENGTH: 8  
168 <212> TYPE: PRT  
169 <213> ORGANISM: Artificial Sequence  
171 <220> FEATURE:  
172 <223> OTHER INFORMATION: synthetic peptide  
174 <400> SEQUENCE: 12  
175 Asp Tyr Lys Asp Asp Asp Asp Lys  
176 1 5  
178 <210> SEQ ID NO: 13  
179 <211> LENGTH: 11  
180 <212> TYPE: PRT  
181 <213> ORGANISM: Artificial Sequence  
183 <220> FEATURE:  
184 <223> OTHER INFORMATION: synthetic peptide  
186 <400> SEQUENCE: 13  
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188 1 5 10  
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193 <213> ORGANISM: Artificial Sequence  
195 <220> FEATURE:  
196 <223> OTHER INFORMATION: synthetic peptide  
199 <400> SEQUENCE: 14

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201 cttagacgtc aggtggcact tttcggggaa atgtgcgcgg aacccttatt tgtttatttt 120
202 tctaaataca ttcaaatatg tatccgctca tgagacaata accctgataa atgcttcaat 180
203 aatattgaaa aaggaagagt atgagtattc aacattttccg tgcgcgccctt attccctttt 240
204 ttgcggcatt ttgccttcct gtttttgctc acccagaaac gctggtgaaa gtaaaagatg 300
205 ctgaagatca gttgggtgca cgagtgggtt acatcgaaact ggatctcaac agcggtaaga 360
206 tccttgagag ttttcgcccc gaagaacggt ttccaatgat gagcactttt aaagtctctg 420
207 tatgtggcgc ggtattatcc cgtattgacg ccgggcaaga gcaactcggg cgccgcatac 480
208 actatttcca gaatgacttg gttgagtact caccagtcac agaaaagcat cttacgggatg 540
209 gcatgacagt aagagaatta tgcagtgcgt ccataaccat gagtataaac actgcggcca 600
210 acttacttct gacaacgatc ggaggaccga aggagctaac cgcttttttg cacaacatgg 660
211 gggatcatgt aactcgcctt gatcgttggg aaccggagct gaatgaagcc ataccaaacg 720
212 acgagcgtga caccacgatg cctgtagcaa tggcaacaac gttgcgcaaa ctattaactg 780
213 gcgaactact tactctagct tcccggcaac aattaataga ctggatggag gcggataaag 840
214 ttgcaggacc acttctgcgc tcggcccttc cggctggctg gtttattgct gataaatctg 900
215 gagccggtga gcgtgggtct cgcggtatca ttgcagcact ggggcccagat ggtaagccct 960
216 cccgtatcgt agttatctac acgacgggga gtcaggcaac tatggatgaa cgaaatagac 1020
217 agatcgcgtg gataggtgcc tctactgatta agcattggta actgtcagac caagtttact 1080
218 catatatact ttagattgat ttaaaaacttc atttttaatt taaaaggatc taggtgaaga 1140
219 tcctttttga taatctcatg accaaaatcc cttaacgtga gttttcgttc cactgagcgt 1200
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221 gctgcttgca aacaaaaaaa ccaccgctac cagcgggtgtt ttgtttgccg gatcaagagc 1320
222 taccaactct ttttccgaag gtaactggct tcagcagagc gcagatacca aatactgtcc 1380
223 ttctagtgtg gccgtagtta ggccaccact tcaagaactc ttagcaccg cctacatacc 1440
224 tcgctctgct aatcctgtta ccagtggctg ctgccagtgg cgataagtgc tgtcttaccg 1500
225 ggttggaactc aagacgatag ttaccggata aggcgcagcg gtcgggctga acgggggggtt 1560
226 cgtgcacaca gccagcttg gagcgaacga cctacaccga actgagatac ctacagcgtg 1620
227 agctatgaga aagcgccacg cttcccgaag ggagaaaaggc ggacagggtat ccggtaagcg 1680
228 gbgcagggtc ggaacaggag agcgcacgag ggagcttcca gggggaaaacg cctggtatct 1740
229 ttatagtcct gtcgggtttc gccacctctg acttgagcgt cgatttttgt gatgctcgtc 1800
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231 ttgctggcct tttgctcaca tgttctttcc tgcgttatcc cctgattctg tggataaccg 1920
232 tattaccgcc tttgagttag ctgataccgc tcgccgcagc cgaacgaccg agcgcagcga 1980
233 gtcagttagc gaggaagcgg aagagcgcgc aatacgcaaa ccgcctctcc ccgcgcgttg 2040
234 gccgattcat taatgcagct ggcacgacag gtttcccgac tggaaagcgg gcagttagcg 2100
235 caacgcaatt aatgtgagtt agctcactca ttaggcaccc caggctttac actttatgct 2160
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237 tgacctgatg tacgccaagc ttgaaggatc atctcatcca caatgtccac aaagaggagc 2280
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242 ctaggttgat tgaccaaatt gtcataaacc cacactacaa taaacggaga aagaacaatg 2580
243 acattgccat gatgcactt gaaatgaaag tgaactacac agattatata cagcctattt 2640
244 gtttaccaga agaaaatcaa gtttttcccc cagggaagaat ttgttctatt gctggctggg 2700
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246 tatcaaatga gaaatgtcaa caacagatgc cagaatataa cattacggaa aatatggtgt 2820
247 gtgcaggcta tgaagcagga ggggtagatt cttgtcaggg ggattcaggc ggaccactca 2880
248 tgtgccaaga aaacaacaga tggctcctgg ctggcgtgac gtcatttga tatcaatgtg 2940

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249 cactgcctaa tcgcccaggg gtgtatgccc ggggcccaag gttcacagag tggatacaaa 3000
250 gttttctaca tgagctcgta attagctgag aattcactgg ccgtcgtttt acaacgtcgt 3060
251 gagcctggga aaaccctggc gttacccaac ttaatcgctt tgcagcacat ccccttttcg 3120
252 ccagctggcg taatagcgaa gagggccgca ccgatcgccc ttcccaacag ttgcgcagcc 3180
253 tgaatggcga atggcgccctg atgcgggtatt ttctccttac gcattctgtgc ggtatttcac 3240
254 accgcataatg gtgcactctc agtacaatct gctctgatgc cgcatagtta agccagcccc 3300
255 gacacccgcc aacaccgcgt gacgcgccct gacgggcttg tctgctcccg gcattccgctt 3360
256 acagacaagc tgtgaccgtc tccgggagct gcattgtgtca gaggttttca ccgtcatcac 3420
257 cgaaacgcgc                                     3430
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260 <211> LENGTH: 279
261 <212> TYPE: PRT
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264 <220> FEATURE:
265 <223> OTHER INFORMATION: synthetic peptide
268 <400> SEQUENCE: 15
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271 His Lys Glu Glu His Ala His Ala His Asn Lys Ile Asp Ile Val Gly
272 20 25 30
273 Gly Ser Asp Ser Arg Glu Gly Ala Trp Pro Trp Val Val Ala Leu Tyr
274 35 40 45
275 Phe Asp Asp Gln Gln Val Cys Gly Ala Ser Leu Val Ser Arg Asp Trp
276 50 55 60
277 Leu Val Ser Ala Ala His Cys Val Tyr Gly Arg Asn Met Glu Pro Ser
278 65 70 75 80
279 Lys Trp Lys Ala Val Leu Gly Leu His Met Ala Ser Asn Leu Thr Ser
280 85 90 95
281 Pro Gln Ile Glu Thr Arg Leu Ile Asp Gln Ile Val Ile Asn Pro His
282 100 105 110
283 Tyr Asn Lys Arg Arg Lys Asn Asn Asp Ile Ala Met Met His Leu Glu
284 115 120 125
285 Met Lys Val Asn Tyr Thr Asp Tyr Ile Gln Pro Ile Cys Leu Pro Glu
286 130 135 140
287 Glu Asn Gln Val Phe Pro Pro Gly Arg Ile Cys Ser Ile Ala Gly Trp
288 145 150 155 160
289 Gly Ala Leu Ile Tyr Gln Gly Ser Thr Ala Asp Val Leu Gln Glu Ala
290 165 170 175
291 Asp Val Pro Leu Leu Ser Asn Glu Lys Cys Gln Gln Gln Met Pro Glu
292 180 185 190
293 Tyr Asn Ile Thr Glu Asn Met Val Cys Ala Gly Tyr Glu Ala Gly Gly
294 195 200 205
295 Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Met Cys Gln Glu
296 210 215 220
297 Asn Asn Arg Trp Leu Leu Ala Gly Val Thr Ser Phe Gly Tyr Gln Cys
298 225 230 235 240
299 Ala Leu Pro Asn Arg Pro Gly Val Tyr Ala Arg Val Pro Arg Phe Thr
300 245 250 255
301 Glu Trp Ile Gln Ser Phe Leu His Glu Leu Val Ile Ser Glu Phe Thr

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VERIFICATION SUMMARY

DATE: 07/22/2002

PATENT APPLICATION: US/09/858,332

TIME: 14:17:24

Input Set : D:\Seqlist.txt

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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date